



**CALIFORNIA ISO**

California Independent  
System Operator

# Path 15 Upgrade Project

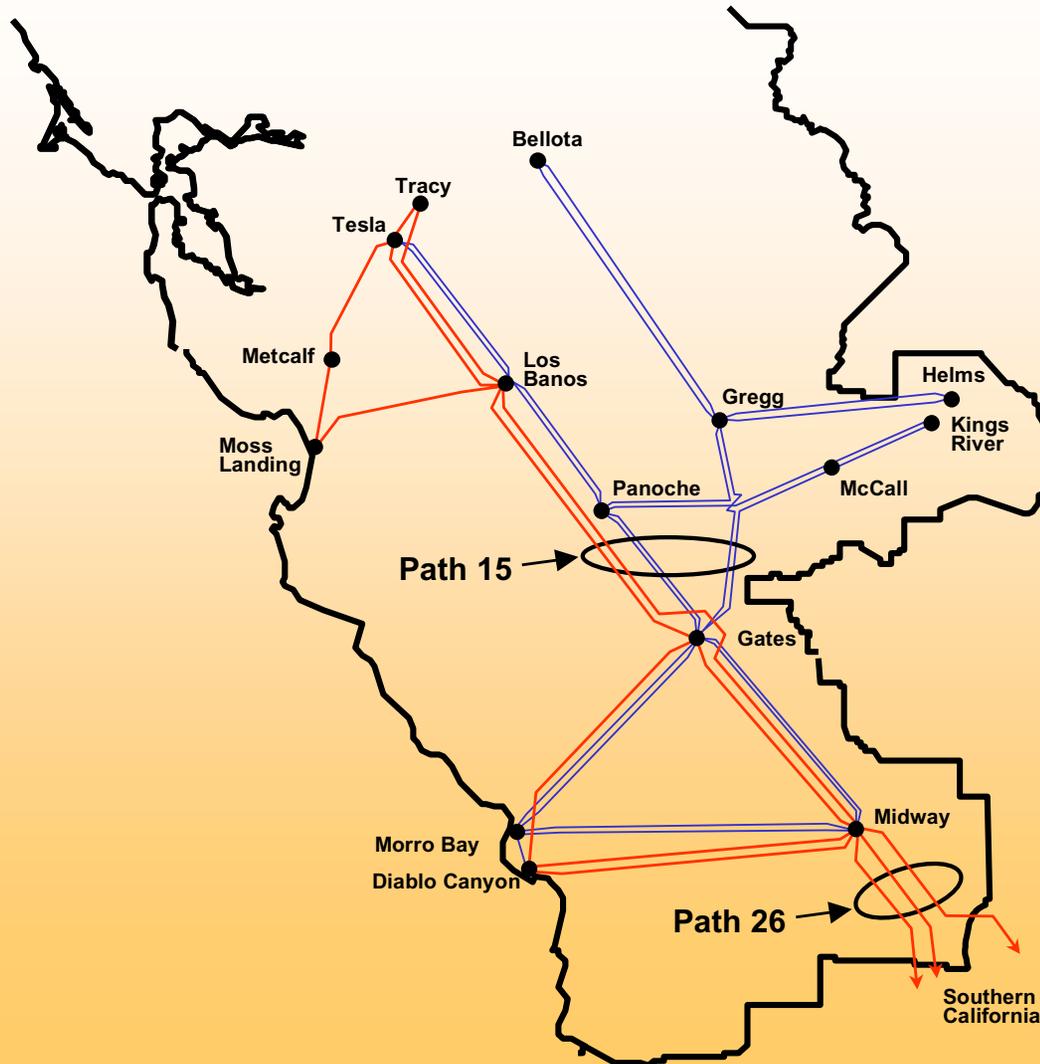
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## Path 15



- Los Banos-Gates 500 kV
- Los Banos-Midway 500 kV
- Gates-Panoche No. 1 230 kV
- Gates-Panoche No. 2 230 kV
- Gates-Gregg 230 kV
- Gates-McCall 230 kV
  
- Rating >> 3900 MW (s-n)  
(Rating complies with WECC double line outage criterion for loss of the two 500 kV lines south of Los Banos)



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§ Install a single circuit 500 kV transmission line between Los Banos and Gates Substations.

§ Perform 500kV work at Los Banos and Gates Substations.

§ Install 250 MVAR of 230 kV shunt capacitors at both the Gates and Los Banos Substations.

§ Install 230 kV substation upgrades at Gates and Midway.

§ Modify the remedial actions in Path 15 and north and south of path 15.



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# Path 15 Upgrade Options

- 100% PG&E Project (net present value of \$485M)
- WAPA/Trans-Elect/PG&E Proposal (net present value of \$435M)



## Summary of Participant's Project Costs and Entitlements

<b>Company</b>	<b>Dollar Investment (\$,Millions)</b>	<b>Type of Facility</b>	<b>Type of Facility Ownership</b>	<b>Transmission Entitlements</b>
Trans-Elect	246.9	None	0%	72%
PG&E	57.8	Substations	100%	18%
WAPA	1.3	Land & Transmission Line	100%	10%
Total	306.0			100%



## PTO Status

- Trans-Elect proposes to become a full PTO
- WAPA proposes to become a partial PTO with regard to their contribution to the Path 15 upgrade and requested that only their 10% ownership in the line be turned over to the ISO and not their entire system
- ISO staff agrees with the partial PTO concept and, in the context of the Access Charge settlement, is working with the transmission owners regarding turning over to the ISO the Path 15 upgrade project



## Trans-Elect and PG&E Rates

- Trans-Elect wants 13.5 % ROR on capital based on 50% equity financing and a rate moratorium for three years
- PG&E wants an additional 2% ROR over their usual ROR and a 10 year depreciation schedule
- FERC has approved both requests
- ISO management recommends that the ISO does not take a position on the appropriate rate treatment. The ISO has not typically taken a position on detailed rate treatment matters because the market participants do so.



## CPUC Proceeding

- March 2001 CPUC directed PG&E to file for a CPCN to upgrade Path 15
- PG&E complied but later filed to withdraw its application to participate in the WAPA proposal; the withdrawal was denied by the CPUC
- PG&E has provided testimony on cost to build the project on their own or participate in the project proposed by WAPA
- CPUC hearings on the benefits of an upgrade have ended; there is no decision on this matter yet (CPUC has indicated it may issue a decision on benefits only, or it may wait to issue a decision on the full project)



# ISO DMA Analysis

## Comparison of Economic Benefits & Cost to Upgrading Path 15

	Economic Benefit (\$ in million)	Present Value of Economic Benefit (\$ in million) <sup>1</sup>
1. Normal Hydro Year	\$104	\$95
2. Normal Hydro Year	\$104	\$95
3. Normal Hydro Year	\$104	\$95
4. Dry Hydro Year	\$305	\$213
Total Economic Benefit (1+2+3+4)	\$617	\$474
Estimate Project Cost <sup>2</sup>		\$473

<sup>1</sup>A discount rate of 9.4% is used in computation

<sup>2</sup>Estimate Project Cost is the present value of the 30-year annual revenue requirements from the participating companies discounted at 9.4%



## Project Need

- Promote economic efficiency and significant economic benefits to California ratepayers
- Simplifies system operation
- Is necessary and cost-effective addition to the ISO controlled Grid
- Not reliability and not needed to meet the ISO Grid Planning Standards, however, it will improve reliability and lower losses
- Increase capacity between southern and northern California by 1500 MW



# Proposed Motion

**Moved, that the Board of Governors,**

***Find that a Path 15 Upgrade Project having a cost with a net present value of no more than \$500 million and providing a benefit of no less than 1400 MW of added transfer capability over Path 15 is needed as a necessary and cost effective addition to the ISO Controlled Grid and should be accepted, without regard to route, as part of the ISO Controlled Grid, without selecting the preferred Participating Transmission Owner to undertake the project and without indicating an opinion on the structure and level of the TRR of the relevant Participating Transmission Owner[s] with regard to the Project.***